



State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

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September 21, 2000

CERTIFIED RETURN RECEIPT Z 230 748 243

Mr. Spenst Hansen
Keystone Surveys, Inc
44 West Broadway, Suite 704S
Salt Lake City, Utah 84101

Re: Reclamation of the Mammoth Mine and Exploration Project Sites, Mammoth Mining Company,
Mammoth Mine, S/023/041 and E/023/033, Juab County, Utah

Dear Mr. Hansen:

We have completed our review of your July 14, 2000, reclamation proposal for the mining and exploration related disturbances that were created and/or reimpacted by Mammoth Mining Company and its predecessors within the general vicinity of the Mammoth Mine located near Eureka, Utah. We apologize for the delay in providing you with a more timely response to your latest reclamation proposal.

After an examination of the Mammoth Mine file records, the assigned exploration files, your recent reclamation proposal, and subsequent onsite field investigations, we have reached the following conclusions:

1. Mammoth Mining Company is responsible for the reclamation of all the mining and exploration-related disturbances associated with the Mammoth Mine project area as identified in your latest reclamation proposal and in the assigned Division files. Mechanized equipment was apparently used to open up, access and/or re-impact many of the older, previously disturbed, mining features and to create new disturbances. Therefore, permanent closure and reclamation of these features is required under the Mined Land Reclamation Act (40-8) and the interpretive Minerals Rules (R647 et seq.). Each mining and/or exploration related disturbance that was outlined in your submittal has been reviewed by Division staff.

We have prepared a summary of your reclamation proposal (entitled, *Keystone Survey, Inc. Reclamation Summary & Division Response*). We have provided a *Division Response* for each mining/exploration related feature outlined in your submittal.

Please note that our initial reclamation recommendations are preliminary and that further refinements and adjustments to the reclamation plans may be required as additional information is acquired and as the final reclamation design details are worked out for each site.

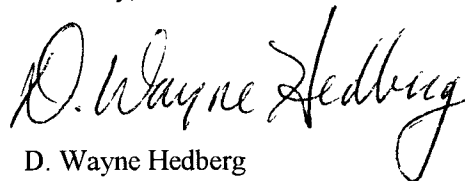
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Spenst Hansen
Mammoth Mine
September 20, 2000

2. It is our understanding that some of the mining and/or exploration related work was not properly permitted with our office before the activity took place. If true, these actions were conducted in non-compliance with the Utah Mined Land Reclamation Act and the Minerals Rules. Our preliminary field investigations indicate that the Mammoth Mine surface disturbance may have exceeded five (5) acres, the threshold for a small mining operation. If confirmed, then a large mining operations permit and reclamation bond would be required for this project area.

In order to begin closure and reclamation of the mine features this fall, it is critical that the reclamation details are finalized for your project areas as soon as possible. Please provide a response within the next 15 days addressing our review document. If you have any questions or wish to schedule a meeting to discuss our response, please contact me at (801) 538-5286, or Tom Munson at 538-5321.

For your information, the Division's Abandoned Mines Reclamation Program is in the process of scheduling a significant reclamation project in the Eureka-Tintic area. This project will involve field inventory and detailed design work to develop plans for closing numerous abandoned mining-related features in areas adjacent to your permitted sites. It is possible that an opportunity may exist for you to obtain substantial economic benefit, as a consequence of their proposed activities, in completing the required reclamation work under your existing permits. If you would like to discuss the details of their proposed project and the potential benefits to you, please contact Mr. Mark Mesch (801) 538-5349, at your earliest convenience.

Sincerely,



D. Wayne Hedberg
Permit Supervisor
Minerals Reclamation Program

jb

Attachment: Review document

cc: Pam Grubaugh-Littig, OGM
Tom Munson, OGM

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Keystone Survey, Inc.

Reclamation Summary and Division Response

(S/023/041 & E/023/033)

September 21, 2000

DISTURBED AREAS

1. C.E. Holden Tunnel

Tunnel was reopened and timbered in 1988 by Centurion Mining Co. for exploration access. The mine tunnel is securely sealed with a steel gate set inside the tunnel about 40 ft. The closure is rendered more secure by screwed and bolted mine timbers at the entrance of the portal. No mining of any kind has been done. Only a small quantity of broken rock and rotted mine timbers have been removed. Sage and wild grasses are growing around the portal.

Reclamation: adding additional mine timbers to keep the public out. Cleanup of old mine timbers near the portal entrance, and some reseeded.

Division Response: *The reclamation proposal is not adequate. It is the Division's position that this mining feature should be appropriately sealed and/or backfilled to provide for a permanent closure.*

2. C.E. (Centennial Eureka) Shaft

Original head-frame is still in place, it has been declared an historical site. Centurion Mines Corp did interior repairs between 1988 and 1993. This was done for interior mine mapping and sampling purposes. There has not been any post law mining disturbances. The shaft has been sealed with a layer of mine timbers and 3 inch by 12 in lagging.

Reclamation: Replace damaged and missing timbers, and putting a bolting chain link fence on top of the timbers.

Division Response: *The reclamation proposal is not adequate. It is our understanding that this shaft was opened, retimbered and worked on for six months. It is our opinion that a chain link fence is an inadequate permanent closure. A more steel grate anchored to a concrete collar is one possible closure scenario that could be used.*

3. Chicken Hawk, Boarding House

There has not been any post law disturbances at these sites.

Division Response: *The Division understands that these caved adits were caved cleaned out by geologists to assess and explore the extent of the underground workings. No reclamation plan is proposed. The requirements of the R647-2-109, Reclamation Practices have not been satisfied. These openings need to be appropriately sealed and/or backfilled..*

New Years, and un-named Surface adits

Underground timbers are in poor condition. The area is vegetated with trees, brush, and various grasses. The adits were mainly used by Centurion Mines Corp geologist for underground exploration

access. No construction work has been done at these locations. These adits are opened with no entrance restriction.

Reclamation: natural vegetation has taken over and covered the areas. Keystone et al believes that no reclamation is needed, but believes that the adits should be closed by AMR.

Division Response: The Division understands that these caved adits were cleaned out by geologists to assess and explore the extent of underground workings. No reclamation plan is proposed. The requirements of the R647-2-109, Reclamation Practices have not been satisfied. These openings need to be appropriately sealed and/or backfilled..

4. Grand Central Tunnel

In 1993 Centurion Mines Corp. tried unsuccessfully to re-open this tunnel to gain access to the Grand Central Shaft at the 190 level. Vegetation is sparse in the area. The portal is presently 12 ft by 12 ft. A locked gate restricts access into the tunnel.

Reclamation: reclamation and closure of this tunnel is the single most important task to be performed by Keystone et al. Backfilling the tunnel will provide for an adequate earthwork seal. Also the area surrounding the portal where waste rock has been dumped will be smoothed out and re-vegetated. Keystone will continue to maintain the gated fence that encloses the area.

Division Response: This reclamation proposal is considered adequate.

17. Carisa Tunnel

The portal is partially filled sealed with unconsolidated material that has fallen from the hillside above. The rock surrounding the tunnel is caving and appears to be unstable. The shaft is surrounded at the surface with a barbed wire fence mounted on tripod steel posts. Vegetation ranges from sagebrush and sparse grasses to trees growing with ten feet of the opening. The tunnel is being occupied by several species of birds for nesting. There has not been any post law disturbances other than entry and inspection.

Reclamation: additional fencing to enclose the shaft and tunnel openings.

Division Response: The Division understands that these partially caved features were cleaned out by geologists to assess and explore the extent of the underground workings. Additional fencing is not adequate reclamation. The requirements of the R647-2-109, Reclamation Practices have not been satisfied. These openings need to be appropriately backfilled and/or otherwise stabilized and permanently closed.

18. Boss Tweed Tunnel

It has been sealed with waste rock from the Red Rose Mine. The area is heavily vegetated with various naturally occurring species of trees, grasses, and bushes. The tunnel has been reclaimed through natural process and this tunnel presently poses no danger. The adjacent Boss Tweed shaft is currently filled within 13 ft of the surface. The Boss Tweed shaft and tunnel waste rock dump is located downhill to the south. There has not been any post law mining disturbances at this site.

Reclamation: unnecessary.

Division Response: *This tunnel needs to be inspected by the Division to determine the adequacy of the "natural" sealing. Additional closure work may be required, depending upon the results of the Division's inspection.*

19. Star Tunnel

The portal is heavily vegetated with several natural species of trees, grasses, and brushes and has been reclaimed by nature. It appears that there has not been any mining or exploration for almost a century. There are no obvious waste rock dumps in the vicinity of the tunnel. The entrance is supported by a wooden frame structure that is in poor condition due to rotting and lack of maintenance. The tunnel is driven into unconsolidated alluvium and is caved at approximately 50 ft. The portal area is experiencing moderate caving and sluffing.

Reclamation: bolting of the wooden timbers to the portal to deny access. This tunnel does not present a danger and should be considered low priority.

Division Response: *The Division understands that this adit was cleaned out by geologists to assess and explore the extent of the underground workings. No reclamation plan is proposed. The requirements of the R647-2-109, Reclamation Practices have not been satisfied. This tunnel needs to be appropriately sealed and backfilled.*

14. Columbus Tunnel

Old maps show that the tunnel extends for over 1000 ft. Because of its length and unknown underground condition, it might constitute a danger to the public. The entrance to the tunnel is in good condition with only a small amount of caving. The portal measure 6 ft by 6 ft. The area is naturally vegetated with trees, grasses, and brush. A gated fence at the Silver Pass road currently restricts access to the Columbus Tunnel. There has not been any post law mining disturbances at this site.

Division Response: *The Division understands that this tunnel was cleaned out by geologists to assess and explore the extent of the underground workings. No reclamation plan was proposed. The requirements of the R647-2-109, Reclamation Practices have not been satisfied. The tunnel should be appropriately sealed and/or backfilled.*

5. Butterfly Gap Road

The Butterfly Gap road is located 1000 ft north from the Mammoth mine center and was initially constructed by Centurion Mines Corp to provide access to 6 sites for exploration drilling. The road is also used for access to the water tanks that supply running water to the Mammoth Mine Center, and for residential purpose in the upper Mammoth area. The road disturbance is approximately 2.1 acres. Keystone Surveys, Inc. owns the Butterfly Gap area. "Keystone is not a mining company, and does not intend to carry out an exploratory drilling program on this or any other portion of its Tintic Mining District properties. Keystone intends to develop the historic Mammoth Mine site and adjacent properties for commercial purposes, primarily related to making a profit from its well known historic value and mining artifacts and old mining ruins."

Reclamation: the road is to be left opened for non-mining uses. The road can be smoothed out and reseeded. The drill pads can be converted into turnarounds and reseeded.

Division Response: *The reclamation plan is inadequate. The road was opened for drilling purposes and therefore needs to be reclaimed to Division's standards to meet the requirements of the R647-2-109, Reclamation Practices.*

6. Mammoth Mine Area

Six of the old mining buildings have been restored and converted to non-mining uses. None of the Mammoth mine center buildings are suited for any mining related purpose. The Mammoth mine center now includes the mine dumps, mining ruins, business offices, storage facilities and residential areas. Keystone et al has been working to do cleanup and fix-up, but with the goal not to destroy the historic appeal of the area.

Division Response: *The original intent of these upgraded and new structures under the Mammoth Mine permit was for mining-related activities. The assay lab (with hazardous chemicals), geologist offices, miner's locker room, core sheds, and several other buildings were built to support continued mining. No documentation has been provided seeking or justifying an alternate post mine land use of these mine related facilities. Until this information is received and found acceptable, the reclamation requirements for these features as originally permitted, remains.*

7. Mammoth Glory Hole Area

The area is enclosed with a chain link fence, which is in need of slight repair. The area is heavily vegetated with natural growth including trees, grasses, and brush. There is no post law disturbance in this area. Keystone maintains tight access control through two locked gates and a 24-hour watchman.

Division Response: *This response is not adequate. This is a very dangerous open mine feature. A six foot high chain link fence should be installed as a temporary means of restricting public access to this feature until a more permanent closure plan is proposed and approved.*

8. Mammoth Copper Oxide Adit

The area around the portal has been naturally revegetated by nature and has extensive growth of brush, trees, and various grasses. The adit is currently boarded up and secured from access.

Reclamation: None is needed

Division Response: *The Division understands that these caved adits were cleaned out by geologists to assess and explore the extent of the underground workings. No reclamation plan was proposed. The requirements of the R647-2-109, Reclamation Practices have not been satisfied. The boarded up adit should be appropriately sealed and/or backfilled.*

9. Road above Plummer Tunnel

The road will be left opened and maintained to allow access to water tanks that provide water to the Mammoth mine site. It will also be left opened because it is the main access road to the Mammoth Glory hole area, and can be used for fire control purposes.

Reclamation: None is needed.

Division Response: *This road was built to provide access to the Mammoth Glory hole area and the fire suppression water tanks. It also provides access to the Copper Oxide adit. There was no*

reclamation plan proposed. Additional justification is required to leave this road unreclaimed following reclamation of these dangerous open mine features.

10. Mammoth Hole-in-the-Wall

The opening is approximately 1 ft by 2 ft and the adit is partially collapsed. The area is heavily vegetated with heavy brush, trees, and various grasses. There has not been any post law mining disturbances. There is considerable waste rock adjoining the adit.

Reclamation: the adit should be fenced or closed

Division Response: The adit must be permanently closed (sealed and/or backfilled) to meet the requirements of the R647-2-109, Reclamation Practices.

11. Mammoth Finn Tunnel

The only access to the tunnel is through the Mammoth mine site, two locked gates and a 24 hour watchman. The area is well vegetated. There has not been any post law mining disturbances. The tunnel is not visible through the vegetation.

Reclamation: None is needed.

Division Response: The Division understands that this tunnel was cleaned out by geologists to allow access for exploration or the underground workings. No reclamation plan is proposed. The requirements of the R647-2-109, Reclamation Practices have not been satisfied. This tunnel must be appropriately sealed and/or backfilled.

10. Mammoth Hungarian Tunnel

The tunnel measures about 4 ft by 3 ft. The waste rock dump is minimal, covering an area less than 10 ft in diameter. There has not been any post law mining disturbances. The only access to the tunnel is through the Mammoth mine site, two locked gates and a 24 hour watchman.

Reclamation: None is needed.

Division Response: The Division understands that this tunnel was cleaned out by geologists to allow access for exploration or the underground workings. No reclamation plan is proposed. The requirements of the R647-2-109, Reclamation Practices have not been satisfied. This tunnel must be appropriately sealed and/or backfilled.

11. Plummer Tunnel

The entrance is timbered and opened. The area is moderately vegetated with heavy brush, tress, and various grasses. The tunnel was reopened in about 1993 by Centurion Mines Corp and a new portal was installed and new timbers were put inside the tunnel. There is some roadway and access disturbance adjacent to the tunnel, and the portal is currently accessible. The only access to the tunnel is through the Mammoth mine site, two locked gates and a 24 hour watchman.

Reclamation: the portal should be sealed with timber using a combination of timber and chain link fencing. Some reseeding of the portal area and access road should be carried out.

Division Response: *The Division understands that this tunnel was cleaned out by geologists to provide access to explore the underground workings for several months. The proposed reclamation plan is not adequate and fails to meet the requirements of the R647-2-109. Reclamation Practices. The tunnel needs to be appropriately sealed and/or backfilled.*

12. Nad Breccia Road

During 1993 the road was widened and improved; the estimated disturbance is 1.0 acre. Keystone plans to keep the road in service as access to panoramic tourist view sites. This road provides access to possible future residential sites.

Reclamation: reseeding the road edges, cleanup of loose rocks and trimming natural overgrowth can be done.

Division Response: *The request to leave this road open may be considered if adequate documentation is provided regarding an approved county zoning plan for future residential development of this area. Otherwise, the road must be reclaimed as required under R647-2-109.*

13. Ajax Mine Adit and Drill Pad

The area is moderately vegetated with several species of grass, tree, and brush. The Ajax mine adit portal is approximately 5 ft by 20 ft and is driven into competent rock. The portal is experiencing caving, mostly of unconsolidated earth material at the portal. The waste rock dumps in this area are considerable in size and mix with dumps from various other mines including the Gold Chain. These waste dumps are from mining done prior to 1930. Except for the construction of the drill pad and setting timbers inside the mine adit, no post law mining has been done.

Reclamation: Keystone commits to completing the reclamation already mostly performed by Centurion. Keystone will complete reseeding of the drill pad and reinforce the closure of the Ajax mine adit.

Division Response: *The plan does not address what kind of closure will be completed on the portal, but sealing and/or backfilling the portal and reseeding of the affected area may ultimately be considered adequate by the Division.*

14. Gold Chain Tunnel

The portal measures 4 ft by 4 ft and is open. The mine portal shows vary little caving. The area is naturally vegetated with heavy brush and various grasses. There has not been any post law mining done at this site.

Reclamation: a fence or other barrier should be constructed to deny access to the tunnel.

Division Response: *The Division understands that this tunnel was cleaned out by geologists to provide access to explore the extent of the underground workings. The proposed reclamation plan is not adequate and fails to meet the requirements of the R647-2-109. Reclamation Practices. The tunnel needs to be appropriately sealed and/or backfilled.*

15. Sioux-Ajax Tunnel

The portal measures approximately 6 ft by 5 ft. The tunnel is sealed with a locked modern timber gate, about 15 ft inside the portal, which denies access. The timber frame is in good condition. The area near the portal shows no caving and the entrance is in good condition. Moderate natural vegetation

surrounds the area and includes various natural grasses and brush. There has not been any post law mining done at this site except the re-timbering inside the tunnel to permit underground sampling and for mining exploration. This work was done by Centurion Mine Corp.

Reclamation: has been completed.

Division Response: A locked timber gate 15 feet inside the portal is not considered a sufficient permanent closure. This tunnel must be sealed and/or backfilled to provide permanent closure.

16. Lower Mammoth Tunnel

The adit portal is 5 ft by 5ft. The area surrounding the tunnel is naturally vegetated with trees, brush, and various grasses. The waste rock dumps are located downhill from the portal. The tunnel is currently sealed with a locked steel grate gate. There has not been any post law mining done at this site. However, Centurion Mining Corp reconstructed the adit portal in 1993 and new timbers were set inside the adit to permit safe entrance.

Reclamation: has been completed.

Division Response: A locked timber gate 15 feet inside the portal is not considered a sufficient permanent closure. This tunnel must be sealed and/or backfilled to provide permanent closure.

20. Nad Breccia Drill Pad

This pad has become part of the road itself and provides very useful turnaround. The pad was constructed in 1993 and is partially reclaimed.

Reclamation: additional smoothing of the pad margins, and reseeding the portions of the pad that is not in use as a turnaround could be done. Keystone will perform these reclamation tasks.

Division Response: Until alternate post mining land uses have been justified and approved, this exploration drill site will need to be appropriately recontoured and reseeded.

21. Mammoth 300 ft Level Tunnel

Presently there is a shaft hoist station at this location. The tunnel is well maintained. It is also sealed by a locked steel gate. Access is restricted by a locked gated road, a lock on the steel gate that is securely mounted at the tunnel portal, and a 24-hour watchman.

Reclamation: none is needed it will serve its new purpose of tourism.

Division Response: Tourism has not been approved as an acceptable post mining land use for this feature. The Division understands that this tunnel was cleaned out and refurbished by geologists to provide access for underground exploration and potential small mine development. No reclamation plan has been proposed to permanently close this feature. Appropriate sealing and/or backfilling of this tunnel is necessary to meet the requirements of must be provided R647-3-109. Reclamation Practices.

22. Mammoth Water Tanks

The tanks are badly corroded and serve no purpose except to add to the historic Mammoth mine center experience. They are in stable condition and pose no danger.

Reclamation: none is needed.

Division Response: New water tanks were installed for fire suppression purposes and MSHA approved. The old historic tanks may be left as pre-law historic structures if the Mammoth Mine tourism plan is ultimately approved as a reasonable and justified post mine land use.

23. Mammoth Lower Tunnel Road

The road is currently used as an alternate access to the residence and business offices at the Mammoth mine center site. The road is maintained and is in good condition. The ore piles date from the active mining period at the Mammoth mine, which is prior to 1930. There has not been any post law mining done at this site.

Reclamation: none is needed.

Division Response: It is the Division's understanding that some of the ore piles are from more recent exploration and underground development work associated with the Plummer tunnel. The Division understands that this road was used post-law to store ore. It serves as an alternate access road to the Mammoth Mine Center area. No reclamation plan is proposed. Additional justification for requiring an alternate access road to this site is necessary, otherwise the post-law ore piles and secondary access road should be reclaimed.

25. Mammoth Mine Storage Area

The Mammoth mine storage area was constructed in 1993 to be an out of site location for storing various antique mining related items that might have use in the future, and therefore should not be discarded. The storage area is surrounded by waste rock dumps from the Gold Chain and Ajax mines which obstruct visibility from the access road. It occupies about 0.25 acres. There are some drill cores and sample cuttings piled neatly there on the ground.

Reclamation: making the area neat, partial reseeding, and the removal of the those samples in bags that are from the drilling on properties no longer owned by Keystone or Mammoth Mining Company.

Division Response: When this pad was inspected it was being used to store mining/exploration related sample bags, drill pipe, and other related mining equipment. Therefore until a legitimate post mining land use is approved this area must be cleaned up, regraded and reseeded.

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